



REMARKS:

With this response, claims 1-37 remain pending. Applicant thankfully acknowledges that claims 18-23 and 28-37 have been allowed.

Information Disclosure Statement

The Examiner has noted that the listing of references in the specification is not a proper information disclosure statement. Applicant notes that the only reference listed in the specification is United States Patent No. 4,831,795 to Sorokan (“the ‘795 patent”). In response to the Examiner’s note, Applicant has submitted an Information Disclosure Statement (PTO Form 1449) listing the ‘795 patent.

The Claims Rejections

35 U.S.C. § 112

The Examiner has rejected claim 17 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In response to this rejection, Applicant notes that claim 17 claims a function of the connector, i.e., the claimed connector is particularly useful in (but is not limited to) connecting a unitized equipment floor of a drilling rig to the substructure of the drilling rig.

35 U.S.C. § 102

The Examiner rejects Applicant’s claims 1-3, 5 and 7-9 under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 1,090,955 to Yorke (Yorke). With respect to Yorke, Yorke does not – contrary to the Examiner’s arguments – disclose a plurality of fixed support members having substantially vertical side walls. Specifically, the Examiner points to portion 13 shown in Figure 4 for support for his argument. Yorke discloses that portion 13 is a lug “formed on the

shanks or heads of the bolts [9].” Yorke at 2:52–53. Yorke further discloses that the purpose for including the lugs 13 is simply to prevent the pieces of the derrick from “being displaced” during the assembly process before the nuts of the bolts 9 can be sufficiently tightened. *Id.* at 2:62–77.

Applicant respectfully submits that the “lugs 13” of Yorke are not the same as the fixed support members claimed in Applicant’s invention. As noted, the lugs 13 of Yorke are attached to the bolts 9 of Yorke for the purpose of preventing the parts of the derrick from separating until the bolts 9 can be tightened (by tightening a nut onto the bolt). It is the bolts 9 of Yorke that are the primary load-carrying members in the connection disclosed in Yorke. The lugs 13 in Yorke are not designed to carry the loads of the connection points of the parts of the derrick assembly. Applicant’s invention specifically discloses and claims fixed support members that support the loads created by the connection of various components together. As such, the bolts 9 of Yorke are more appropriately compared to the fixed support members of Applicant’s invention.

The connector disclosed in Yorke is designed to connect component parts of a metallic derrick together and, thus, the connector is not necessarily suitable for connecting large pieces of equipment together. Contrary to Yorke, the Applicant’s connector is designed to handle the substantial loads created by connecting large pieces of equipment together. One of the ways the connector of Applicant’s invention accomplishes this is by utilizing specially-shaped fixed support members that have vertical (or substantially vertical) side walls for purposes of increasing the horizontal load bearing capability of the fixed support members. The significant horizontal load handling capability is attributable to the mating of the vertical (or substantially vertical) side walls of the fixed support members with the vertical (or substantially vertical) side walls of the support notches of the mating lugs. The use of vertical (or substantially vertical) side walls allows the horizontal loads imposed on the connection to be carried over a greater surface area.

Specifically, the side walls of the fixed support members are in contact with the side walls of the support notches along the entire length of the walls. Any horizontal forces acting on the connection will be spread out over the entire surface of the walls and, thus, the stresses placed on the connection point by these horizontal forces is reduced. Further, if significant horizontal forces are expected, the length of the side walls of the fixed support members and the length of the side walls of the support notches can be increased to provide an even greater area to handle such forces.

Contrary to Applicant's invention, Yorke discloses the use of round bolts 9 (as shown in Figures 2 and 3 of Yorke) to carry the loads imposed on the connector. The round bolts 9 of Yorke are akin to the prior art "pins" for which the Applicant's invention was designed to replace. The circular cross section of the bolts 9 of Yorke allows for only a small area over which horizontal forces acting on the connection can be spread. Because the bolts 9 of Yorke do not have side walls as disclosed and claimed in Applicant's invention, the bolts 9 of Yorke could not handle the same potential horizontal loads as the fixed support members of Applicant's invention.

Moreover, the bolts 9 of Yorke are not "fixed," but rather can be inserted in and removed from the connection points for the parts of the derrick assembly. The bolts 9 of Yorke require separate nuts that must be sufficiently tightened onto the bolts to ensure that the bolts do not come free and to hold the parts of the derrick assembly together. The need to tighten numerous nuts to the bolts 9 of Yorke would largely eliminate the efficiency and ease with which pieces of equipment can be connected together that is provided by Applicant's invention. As such, Yorke does not disclose a support member that is "fixed" as disclosed and claimed in Applicant's invention.

Based on the foregoing discussion, Applicant respectfully submits that independent claim 1 is not anticipated by Yorke. As Applicant believes that he has justified the patentability of independent claim 1, claims 2-3, 5 and 7-9 that depend from claim 1 are necessarily also patentable. Therefore, Applicant does not comment further on those dependent claims.

Further, while Applicant does not agree with the Examiner that Yorke discloses each additional element of Applicant's claimed invention, Applicant believes it is unnecessary to address the Examiner's arguments with respect to each of these remaining elements, as Applicant has shown that Yorke does not disclose a fixed support member with side walls. Nothing herein shall be construed as an acquiescence to the Examiner's arguments that Yorke discloses the remaining elements of Applicant's claimed invention.

35 U.S.C. § 103

The Examiner rejects Applicant's claim 6 under 35 U.S.C. § 103(a) as being obvious in light of Yorke. The Examiner states that "Yorke discloses the claimed invention except for specifically disclosing that the lugs are welded to the plates."

Similarly, the Examiner rejects Applicant's claims 4, 10-17, and 24-27 under 35 U.S.C. § 103(a) as being obvious in light of Yorke and U.S. patent 5,845,453 to Goya (Goya). In particular, with respect to claims 4 and 10-16, the Examiner states that "Yorke discloses the claimed invention except for specifically disclosing the use of tapered guide surfaces" and that Goya teaches the use of tapered guide surfaces.

In response to these rejections, Applicant respectfully reminds the Examiner that for a claim to be obvious, there must be a) a suggestion or motivation to combine reference teachings, b) a reasonable expectation of success, and c) the references must teach all of the claim limitations. MPEP § 706.02(j); *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). The Examiner has not pointed to any suggestion in Yorke or Goya to combine such references.

Further, as discussed above with respect to the Examiner's rejections based on 35 U.S.C. §102(b), Yorke does not teach the use of fixed support members with side walls and, thus, these references do **not** teach all of the claim limitations. As such, Applicant respectfully submits that the discussion of Yorke above shows that claims 4, 6, and 10-16 are not obvious based on the disclosure of Yorke combined with Goya.

With respect to claim 17, the Examiner states that "Yorke in view of Goya discloses the basic claimed invention, wherein the structural connector is capable of connecting a unitized equipment floor of a drilling rig to a substructure of a drilling rig." Applicant again notes that the Examiner has not pointed to any suggestion in Yorke or Goya to combine such references, nor do these references teach all of the claim limitations (as discussed above with respect to the Examiner's rejections based on 35 U.S.C. §102(b)). Further, there is no teaching or suggestion in either Yorke or Goya that the connectors disclosed in those references are capable of withstanding the substantial forces that would be imposed on such connectors if used to connect a unitized equipment floor of a drilling rig to a substructure of a drilling rig. As such, Applicant respectfully submits that claim 17 is not obvious based on the disclosure of Yorke combined with Goya.

Finally, with respect to claims 24-27, the Examiner states that "Yorke in view of Goya discloses a method of connecting structural components comprising . . . providing each support plate with a plurality of fixed support members 9 extending therethrough" Applicant again notes that the Examiner has not pointed to any suggestion in Yorke or Goya to combine such references, nor do these references teach all of the claim limitations (as discussed above with respect to the Examiner's rejections based on 35 U.S.C. §102(b)). As such, Applicant respectfully submits that claims 24 through 27 are not obvious based on the disclosure of Yorke combined with Goya.



Further, while Applicant does not agree with the Examiner that Yorke and Goya disclose the remaining steps of the method claimed in claims 24-27, Applicant believes it is unnecessary to address the Examiner's arguments with respect to each of these remaining steps, as Applicant has shown that the Examiner has not made a prima facie case that these claims are obvious. Nothing herein shall be construed as an acquiescence to the Examiner's arguments that Yorke and Goya, either individually or combined, disclose the remaining steps of the claimed method.

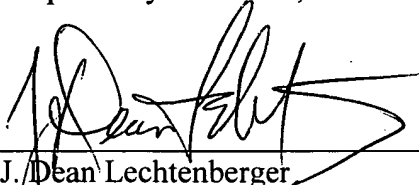
Based on the foregoing discussion, Applicant believes that he has justified the patentability of claims 4, 10-17, and 24-27.

* * * * *

Applicant submits that claims 1-17 and 24-27 are patentable and are not anticipated or rendered obvious by the prior art of record. Coupled with the Examiner's allowance of claims 18-23 and 28-37, Applicant respectfully submits that claims 1-37 are allowable. Accordingly, Applicant respectfully requests the Examiner to issue a notice of allowance for these claims. The Examiner is invited to contact the undersigned attorney at 713-787-1630 with any questions, comments, or suggestions relating to this patent application.

Respectfully submitted,

Date: 7/1/05



J. Dean Lechtenberger
Reg. No. 34,859
Patent Attorney for Applicant
HOWREY SIMON ARNOLD & WHITE, LLP
750 Bering Drive
Houston, Texas 77057-2198
Customer No. 23369